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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Docket No. 13578US01)

In the Application of:

David Chaohua Wu
Hoang Nhu
Russ Lambert
Alexander G. MacInnis
Ronald Crochiere

EXPRESS MAIL NO. EL848999937US

DATE: June 25, 2002

Serial No. 10/083,052

Filed: February 26, 2002

For: System and Method of Performing Digital
Multi-Channel Audio Signal Decoding

Examiner: not assigned

Group Art Unit: 2819

AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sirs:

In response to the Notice to File Corrected Application Papers mailed May 31, 2002, the period for response to which runs to July 31, 2002, applicant submits the following amendments and remarks which are believed to be fully responsive to the outstanding issues.

IN THE SPECIFICATION

Please amend the specification as follows:

20052230-29023001

Delete the current Abstract on pages 31 and 32 and replace with the following

Abstract which says:

A system and method are disclosed for performing digital multi-channel decoding of a BTSC composite audio signal. Analog-to-digital conversion is performed on a composite analog audio signal at a fast clock rate to generate a composite digital audio signal at a first sample rate. Digital frequency compensation is performed on the composite digital audio signal at the first sample rate to generate a compensated composite audio signal. Digital channel demodulation and filtering are performed on the compensated composite audio signal at the first sample rate to generate a first single channel audio signal at a second sample rate.

REMARKS

In the outstanding Office Action, the Abstract has been cited as not complying with 37 CFR 1.72 (b).

The Abstract has been amended to comply with 37 CFR 1.72(b) and does not add any new matter.

The Applicants respectfully submit that the amendment to the Abstract above overcomes the cited non-compliance and, therefore, the Notice to File Corrected Application Papers has been fulfilled. A favorable action on the merits is respectfully requested.

Should anything remain in order to place the present application in formal condition, you are kindly invited to contact the undersigned at the telephone listed below.

Please charge any additional fees or credit overpayment to the Deposit Account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

Respectfully submitted,

McANDREWS, HELD & MALLOY, LTD.

Date: June 25, 2002

By: David J. Muzilla
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A system and method are disclosed for performing digital multi-channel decoding of a BTSC composite audio signal. [Each subsequent stage of the digital multi-channel decoding process is performed at the lowest sampling rate that yields acceptable performance for that stage. Analog-to-digital conversion of the composite audio signal is performed first to generate a composite digital audio signal. After analog-to-digital conversion, all signal processing may be performed in the digital domain. The composite digital audio signal is digitally filtered to frequency compensate for variations caused by previous stages of processing, including IF demodulation. Digital channel demodulation and filtering are performed to isolate single channels of the composite digital audio signal such as SAP, L-R, and L+R channels. SAP and L-R channels are DBX decoded resulting in corresponding decoded signals using a unique combination of digital filters that are an efficient translation of a corresponding combination of analog filters. The decoded L-R channel and the L+R channel are re-matrixed to form left and right stereo signals. Any of the SAP signal, left and right stereo signals, and L+R channel signal may be sample rate converted and output at a standard audio output rate.] Analog-to-digital conversion is performed on a composite analog audio signal at a fast clock rate to generate a composite digital audio signal at a first sample rate. Digital frequency compensation is performed on the composite digital audio signal at the first sample rate to generate a compensated composite audio signal. Digital channel demodulation and filtering are performed on the compensated composite audio signal at the first sample rate to generate a first single channel audio signal at a second sample rate.